

ABSTRACT OF THE DISCLOSURE

A process instrument comprises a housing, a terminal in the housing for connection to a two-wire process loop and an active element for sensing a characteristic of a process. A control circuit is disposed between the terminal and the active element for measuring 5 the sensed characteristic and controlling the two-wire process loop responsive to the sensed characteristic. A split intrinsic safety barrier comprises current limiters electrically connected between the terminal and the control circuit and a diode safety barrier electrically connected between the control circuit and the active element.